



U.S. Department
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**Pipeline and
Hazardous Materials
Safety Administration**

Enhancing Pipeline Safety in Your Community

CALIFORNIA STATE FIRE MARSHAL
PIPELINE SAFETY WORKSHOP

March 22, 2006

Ross Reineke
Community Assistance and Technical Services



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Office of Pipeline Safety

Mission:

To ensure the
safe,
reliable,
and **environmentally sound**
operation of the Nation's pipeline
transportation system



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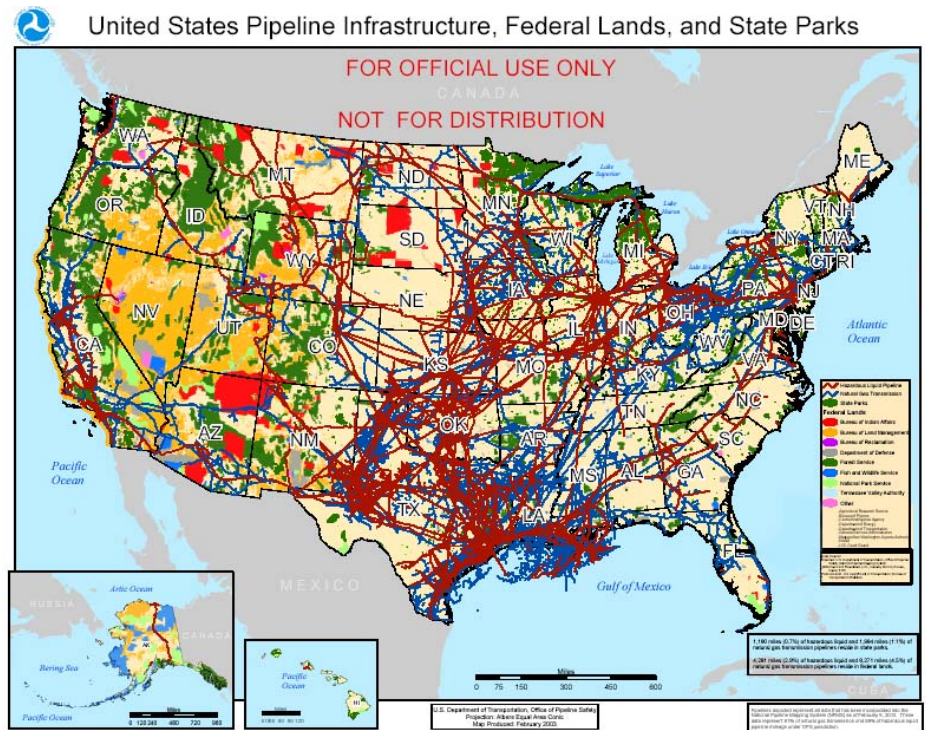
The Nation's Pipeline Transportation System

Hazardous Liquids Pipelines
169,000 miles

Natural Gas Transmission
323,000 miles

Gas Distribution Pipelines
1.2 million miles of main
61 million service lines

Liquefied Natural Gas
107 Plants





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Pipeline Safety Challenges

Natural Gas Transmission Pipeline Incident



- March 23, 1994, Edison, NJ
- Natural gas transmission line operating at 970 psig
- Force of escaping gas excavated area around pipe and gas ignited
- Several apartment buildings burned
- Investigation found “teeth marks” on pipeline
- Crushed Ford Ranger pick-up truck excavated near rupture



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Pipeline Safety Challenges

Hazardous Liquids Pipeline Accident

- **June 10, 1999, Bellingham, WA**
- Gasoline leaked into a creek in a park
- 1.5 hours after leak started, gasoline ignited
- 3 fatalities, 8 injuries
- \$45 million in property damage
- Leak caused by damage to pipeline during 1994 water treatment plant construction





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Three Major Pillars of the OPS Strategy

- Risk and Integrity Management
- Shared Knowledge and Responsibility
- Improving our Stewardship in a Changing World - Energy, Environment and Security





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OPS Strategic Focus

- Improve the safety of the Nation's pipelines
 - Reduce the number of incidents
 - Reduce the likelihood of major incidents
 - Mitigate the consequences of incidents
- Provide the basis for increased public confidence in pipeline safety



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Risk and Integrity Management



Public Officials role in
pipeline Integrity
Management and
identification of High
Consequence Areas



Pillar 1 - Risk and Integrity Management

Integrity Management Explained

Systematic, comprehensive approach to improving pipeline safety by:

- Requiring **periodic assessments** of Pipeline Systems
- Integrating and evaluating risk information
- Improving Federal/State oversight of operator Integrity Management programs and plans



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Pillar 1 - Risk and Integrity Management

Pipeline Integrity Management Programs

- Hazardous Liquids Pipelines (2000)
Baseline Assessments complete by 2008
- Gas Transmission Pipelines (2003)
Baseline Assessments complete by 2012
- Gas Distribution Pipelines
Under Development





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Pillar 1 - Risk and Integrity Management Transmission & Hazardous Liquids Pipeline IM Requirements

Pipeline Operators must:

1. **Assess** pipeline integrity in **high consequence areas**
2. **Integrate** risk and knowledge
3. **Allocate** resources to focus on the highest risks
4. **Develop** performance measures to monitor progress
5. **Improve** through re-evaluation and assessment of the written integrity management programs





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Pillar 1 - Risk and Integrity Management

High Consequence Area Definition

- Integrity Management directs resources to **High Consequence Areas (HCA)** – places where the consequences of a pipeline accident are likely to be severe
- **Identified Sites** are considered **HCAs**
Beaches – Playgrounds – Stadiums –
Religious Facilities – Schools – Hospitals –
Outdoor Theaters – Etc.



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Pillar 1 - Risk and Integrity Management

Good Intentions \neq Good Results

Good Intentions

Operator mass mailings to public safety officials requesting Identified Site lists.

Results

Public officials unclear about their responsibility.
Public officials not provided with **pipeline routes**.

Outcome

Operators turned to signs, licensing records, lists, and maps.



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Shared Knowledge and Responsibility



- Pipeline Maps
- First Responder Training
- Stakeholder Website
- Public Awareness Rule



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Pillar 2 – Shared Knowledge and Responsibility

Accessing Pipeline Maps

<http://www.npms.phmsa.dot.gov/>



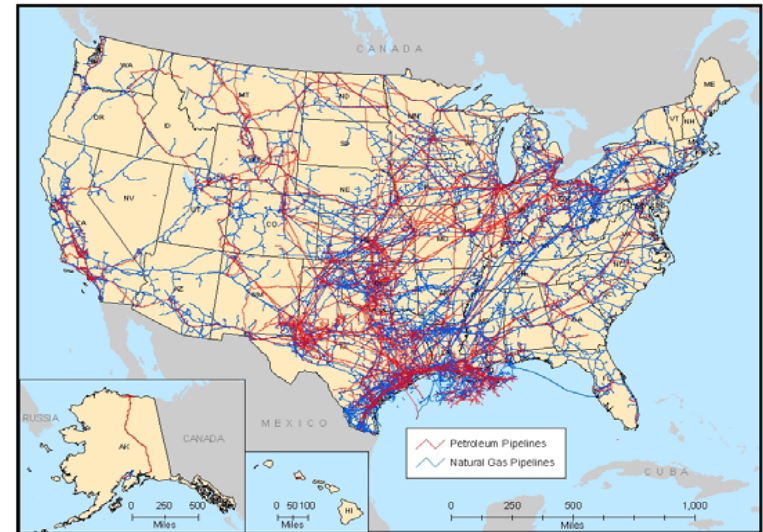


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Pillar 2 – Shared Knowledge and Responsibility

National Pipeline Mapping System (NPMS)

- Layered Geographic Information System (GIS)
- Includes hazardous liquid & gas transmission pipelines, breakout tanks, and LNG plants
- Password-protected access to government agencies
- Public access to identify pipeline operators by County or Postal Code





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NPMS Features

- Pipeline location is approximate
- Use of the maps is NOT a substitute for calling the One-Call Center prior to excavation
- Password-protected users limited to viewing pipeline facilities within their jurisdiction
- “Active” button allows users to identify the operator of a pipeline
- On-line help available at the ? icon



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Pillar 2 – Shared Knowledge and Responsibility

Pipeline Emergencies First Responder Training

Comprehensive training program for responding to pipeline emergencies, developed by Hildebrand and Noll

Textbook

Video

Instructor Program





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Pillar 2 – Shared Knowledge and Responsibility

OPS Stakeholder Communications Website

<http://primis.phmsa.dot.gov/comm/>



The new OPS Stakeholder Communications website is designed as a matrix, in which audience specific links represent the x-axis...



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OPS Stakeholder Communications Web Site

...and tightly-focused
Topic areas represent
the y-axis

**Inspection and
enforcement**

Pipeline basics

**Pipeline safety
regulations**

**Pipelines &
homeland security**

**R&D for safer
pipelines**

**Public education
programs**

**Pipeline safety
statistics**

**Community
assistance and
technical services**

Pipeline library

A pipeline glossary

Pipeline FAQs





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Choose Your State for mileage and incident data, points of contacts, and State specific links

Pipeline Library / State Pages / North Dakota /

North Dakota

[Inspection and enforcement](#)

[Pipeline basics](#)

[Pipeline safety regulations](#)

[Pipelines & homeland
security](#)

[R&D for safer pipelines](#)

[Pipeline damage prevention](#)

[Pipeline safety statistics](#)

[OPS community assistance](#)

[Pipeline library](#)

[A pipeline glossary](#)

Choose State 



More than 4,000 miles of energy transportation pipelines are found in North Dakota. This mileage is divided almost evenly between pipelines carrying natural gas, and those carrying hazardous liquids such as fuel oils and gasoline.

Although by far the safest form of transport for these products, pipelines can and sometimes do rupture. For this reason we encourage you to learn about the pipelines in your community and the products they carry.

From the Red River to the Little Missouri, and from Williston to Wahpeton, pipeline safety is an issue that connects all residents of North Dakota.

[Call Before You Dig!](#)

Remember, before you dig or excavate, you are required by law to notify NORTH DAKOTA ONE-CALL at 1-800-795-0555. »

[Who regulates pipelines in North Dakota?](#)

OPS and the state of North Dakota share regulatory responsibilities through a cooperative agreement. »

[Your OPS Point of Contact](#)

Do you need a contact within OPS, or a speaker for your next community council meeting? Have questions about pipeline inspections or a pipeline's

[Who operates the pipelines in your area?](#)

OPS and the National Pipeline Mapping System enable you to find out simply by entering your





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Pillar 2 – Shared Knowledge and Responsibility

Pipeline Operator Public Awareness Programs

Not a New Regulatory Requirement:

- Damage Prevention Programs for Excavators
 - 192.614(c) and 195.442(c)
- Emergency Plans for Fire, Police, & Public Officials
 - 192.615(c) and 195.402(c)(12)
- Public Education
 - 192.616 and 195.440
- Gas Transmission Integrity Management
 - 192.911(m)



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New Requirements for the Pipeline Operator

- Final **Public Awareness Rule** effective June 20, 2005
- 49 CFR 192.616 and 195.440 titled “Public Awareness”
- Programs must follow the guidance in API RP 1162, First Edition, December 2003 (“RP 1162”)
- Baseline and Supplemental (aka Enhanced) Programs



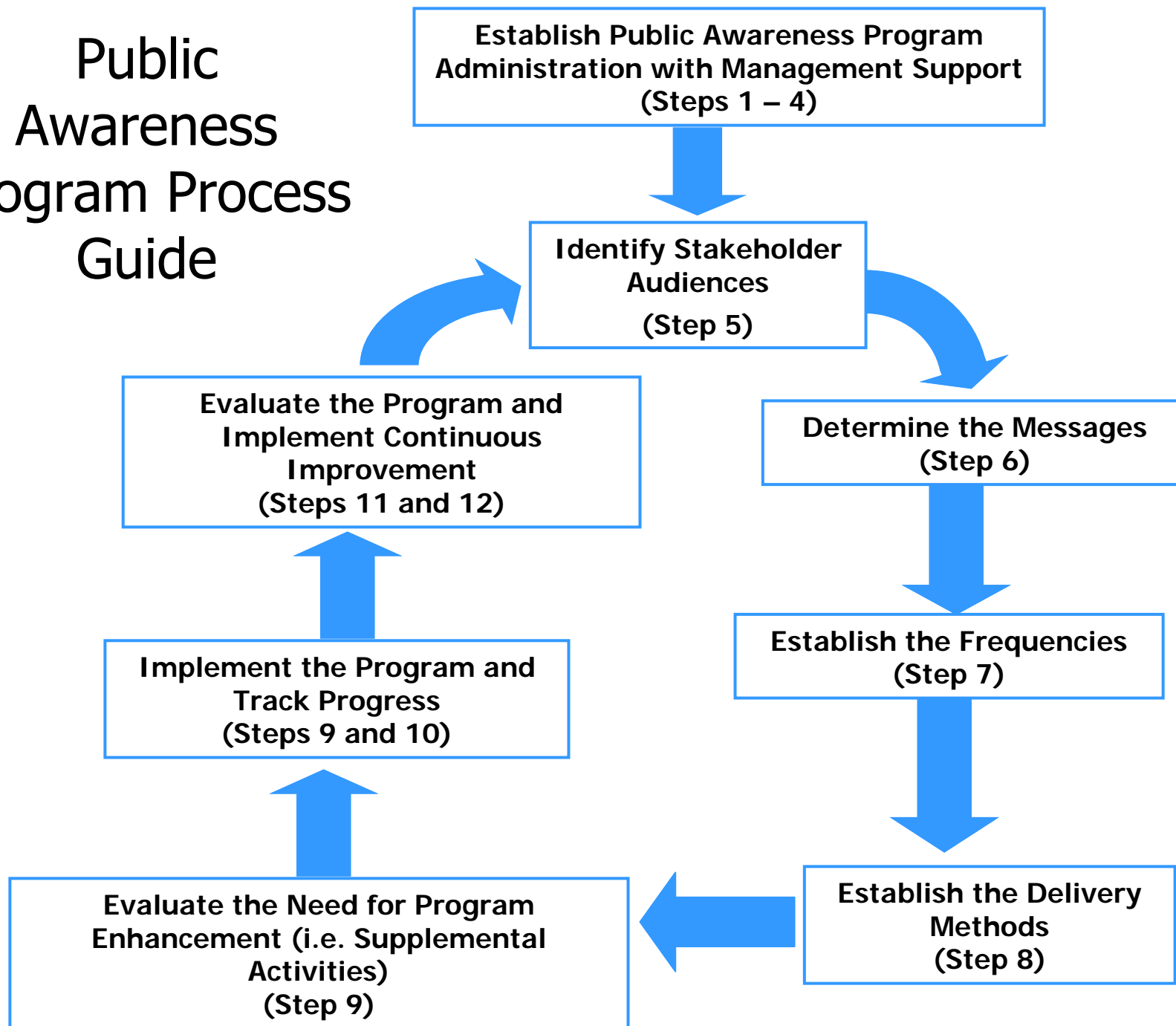
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Applicability of the Public Awareness Rule

- Gas Transmission & Hazardous Liquids
- Gas Distribution
 - Communication about Liquefied Natural Gas (LNG) and Propane/Air peak-shaving facilities are not part of the public awareness program required by 192.616
- Gas Gathering

Public Awareness Program Process Guide





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Objectives of the New Public Awareness Rule

- Promote the use of One-Call Systems and other damage prevention activities
- Educate stakeholders about:
 - Possible hazards associated with unintended pipeline release
 - Physical indications of a pipeline release
 - Public safety measures in the event of a pipeline release
 - Procedures for reporting pipeline release



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Pillar 2 – Shared Knowledge and Responsibility

Messages to Emergency Responders

- Pipeline purpose and reliability
- Awareness of hazards and prevention measures
- Emergency preparedness communications including 24/7 contact information
- Pipeline location information and availability of NPMS
- How to get additional information



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Stewardship in a Changing World



- Consensus Standards
- LNG Plant Siting
- Community Assistance and Technical Services (CATS)



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Pillar 3 - Stewardship In a Changing World

LNG Safety and Siting



- OPS working with the National Fire Protection Association (NFPA) to revise consensus standard for LNG Plant siting and safety

- Increased LNG Import capability needed for gas supply adequacy
- NASFM LNG Project to educate first responders near import terminals





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Stewardship In a Changing World

Community Assistance & Technical Services

- New OPS Program to improve Communications with variety of Pipeline Safety Stakeholders
- Serve on Common Ground Alliance Committees to improve Damage Prevention Practices, Education, & Data Collection
- Work with State Partners to assess and strengthen State Damage Prevention programs
- Provide Pipeline Safety information during FERC Hearings for new gas pipelines and LNG facilities
- Leading Pipeline Repair Permit Streamlining efforts



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